## Fall 2019 Levee Maintenance Deficiency Summary Report

Overall LMA & Unit Ratings, including USACE Erosion Survey

#### Sacramento River Basin

RD0787	Overall LMA Rating	Total LMA Miles						
Reclamation District No. 0787 Fair	A	4.45						
Rated Item		Maintena	nce Deficiency		Enforc	ement	Design & System Obsolescence	
Rated item	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
Earthen Levee								
Encroachments	0.01		0.01	0.23%				
Supplemental								
DRAFT DWR UCIP Field Study					0.01			
2017 Storm Damage	0.13		0.13	2.92%				
LMA Totals:	0.14	0.00	0.14	3.15%	0.01	0.00	0.00	0.00
Unit No. 01 Colusa Basin Drain LB	Overall Unit Rating	Total Unit Miles						
RD0787	Α	4.45						
Rated Item		Maintena	nce Deficiency		Enforc	ement	Design 8 Obsole	& System scence
Nateu item	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
Earthen Levee								
Encroachments	0.01		0.01	0.23%				
Supplemental								
DRAFT DWR UCIP Field Study					0.01			
-				0.000/			,	
2017 Storm Damage	0.13		0.13	2.92%				

Winter \*\*

#### Flood Control Project Maintenance Levee Inspections

## **LMA District Cover Sheet**

Fall 2019 Levee Inspection Results

## **Reclamation District No. 0787 Fair**

Spring

Summer \*\*

Fall

	(March - May)	(Julie - August)	(September - November)	(December - February)
† Overall LMA Rating (Fall Only)			A	
	** Non-receipt of Summ Reports may effect or			
† <u>SPRING INSPECTIONS:</u> Overall maintenance deficiencies are rated	ratings are not detern d using the same crite			ual maintenance
FALL INSPECTIONS: The overall maintena within the attached u			ion and maintenance de ended to be an indiction o	
Comments				

## **Unit Cover Sheet**

Fall 2019 Levee Inspection Results

#### **Reclamation District No. 0787 Fair**

Waterway	Bank	Unit Miles
Unit No. 01 Colusa Basin Drain	Left	4.45

	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			Α	
Date of Inspection	4/8/2019 - 4/8/2019		10/2/2019 - 10/2/2019	
DWR Inspector	Zach Jojola		Zach Jojola	
Accompanied By	Roger Cornwell River Garden Farms			

#### Summer & Winter Inspections

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

#### http://cdec.water.ca.gov/lma.html

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.

## Levee Inspection Report By Mile - Fall 2019

## **Reclamation District No. 0787 Fair**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/02/2019 10/02/2019	Zach Jojola

LM Start		Rating **	Α	Issue No.		7				
LM End		Issue Type +	Ма	Location * N/A						
Category	GPS La	atitude	e/Longitude							
Calegory				Start		End				
Item	Emergeno	y Supplies &			0		0			
item	Equipmen	nt			0		0			
DWR ID DWR_RD0787_01_s _ 2013_7										
		Comn	nent Cod	de						
		Inspecto	or Comm	nent						
RD 787 shares flood resources with RD 108 with a stockpile of flood response materials.										
	esponse materials.									

No Photos

LM Start		Rating **	Α	Issue No.		8	
LM End		Issue Type +	Ma	Location *		N/A	
Category	Earthen L	evee		GPS La	atitud	le/Longitude	
Category				Start		End	
Item		s & Maintena	nce		0		0
item	Manuals				0		0
DWR ID	DWR_RD0	787_01_s _ 201	3_8				
		Comn	nent Cod	de			
		Inspecto	or Comm	nent			

RD 787 is current with O&M manuals.

No Photos

LM Start		Rating **	Α	Issue No.		10		
LM End		Issue Type +	Ма	Location *		N/A		
Category	GPS La	atituc	le/Longitude					
Calegory				Start		End		
Item	Flood Preparedness & Training				0		0	
item					0		0	
DWR ID	DWR_RD0	787_01_s _ 201	2_10					
		Comn	nent Cod	le				
	Inspector Comment							
RD 787 wo	RD 787 works jointly with RD 108 on training and flood response.							

No Photos

## Levee Inspection Report By Mile - Fall 2019

#### **Reclamation District No. 0787 Fair**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/02/2019 10/02/2019	Zach Jojola

LM Start	0.04	Rating **	М	Issue No.		17		
LM End	0.04	Issue Type +	En	Location *				
Category				GPS Latitude/Longitude				
Category	gory					End		
Item		WR UCIP Fie	ld	38.7991	59°	38.799159°		
пеш	Study			-121.7258	74°	-121.725874°		
DWR ID	22892							
	Comment Code							

Inspector Comment

DS\_ID:22892 FS\_ID:55350 EP\_NO: 9392

Repair Type: Non-Urgent Crossing Status: Found

UCIP Comments: 09/30/2019 Crossing creates a levee slope depression near LS toe. Top of a concrete headwall shows up in the depresiion. (O.Yakimov - DWR UCIP)Dense vegetation limits the inspector's visibility to identify signs of pipe failure (leaks) along the slope. Recommend removing vegetation along pipe alignment to conduct proper inspection of structure.

FIELD\_STRUCT\_DESC: 36-inch concrete irrigation pipe through the levee, 17 feet below the crown. Slide gate in 36-inch standpipe on the waterside (WS). 24-inch pipe from standpipe to pump house mounted on steel structure in channel. (36-inch pipe authorized under Automatic Board Order (ABO) issued as Permit No. 9392, 1974 - River Garden Farms; pump structure and 24-inch steel pipe authorized under Permit No. 3878, 1962-River Farms Company of California). [Additional Reference(s): DWR Levee Logs, 1990]

FS Date: 9/30/2019 2:50:15 PM

LM Start	0.04	Rating **	М	Issue No.	17 (cont)
LM End	0.04	Issue Type +	En	Location *	

Photo 1 of 3: UCIP\_FA\_2019\_55350\_81594.jpg



Pump house and walkway on river's edge

#### Photo 2 of 3: UCIP\_FA\_2019\_55350\_81593.jpg



Pipe outlet in irrigation ditch on LS

## Levee Inspection Report By Mile - Fall 2019

#### **Reclamation District No. 0787 Fair**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/02/2019 10/02/2019	Zach Jojola

LM Start	0.04	Rating **	М	Issue No.		17 (cont)
LM End	0.04	Issue Type +	En	Location *		
Category	Suppleme	GPS La	titud	e/Longitude		
Calegory	эгу			Start		End
Item	DRAFT D	WR UCIP Fie	ld	38.79915	9°	38.799159°
пеш	Study	Study			'4 °	-121.725874°
DWR ID	22892					·

## Comment Code

#### Inspector Comment

DS\_ID:22892 FS\_ID:55350 EP\_NO: 9392

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Reference(s): DWR Levee Logs, 199 FS Date: 9/30/2019 2:50:15 PM Photo 3 of 3: UCIP\_FA\_2019\_55350\_81595.jpg



Depression on LS slope

LM Start	0.38	Rating **	С	Issue No.		5	
LM End	0.38	Issue Type +	Ma	Location *		WS	
Category Earthen Levee				GPS Latitude/Longitude			
Category				Start		End	
Item	Encroach	ments		38.7960	16°	38.796016°	
item				-121.7304	67°	-121.730467 °	
DWR ID	DWR_RD0	787_01_s _ 201	19_5				
Comment Code							

DE : Debris

#### Inspector Comment

There is a TV on the waterside slope that needs to be removed.

No Photos

* Location	** Rating		+ Issue Type
LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement

## Levee Inspection Report By Mile - Fall 2019

#### **Reclamation District No. 0787 Fair**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/02/2019 10/02/2019	Zach Jojola

LM Start	0.39	Rating **	A/W	Issue No.	2					
LM End	0.50	Issue Type +	Ma	Location *	WS					
Category	Supplemental					GPS Latitude/Longitude				
Calegory		Start		End						
Item	2017 USA	CE Erosion S	Survey	38.7959	31 °	38.795268	0			
пеш				-121.7306	27°	-121.732566	0			
DWR ID	ID DWR_RD0787_01_f _ 2018_2									
Comment Code										

No Photos

Inspector Comment

2017 Site ID: CBD 0.5 L Status: Eroding

2017 Field Notes: Wide levee section, roughly 40 ft.

Site History: 2011 - Large scallops throughout the entire reach. Toe scour due to tree pop-outs, resulting in a steepening slope. The reduced resistive forces plus clay levee may increase the loading. Additional erosion due to human use.

LM Start	0.67	Rating **	A/W	Issue No.	3		
LM End	0.85	Issue Type +	Ma	Location *		WS	
Category	ental	GPS Latitude/Longitude					
Calegory	tegory					End	
Item	2017 USA	CE Erosion S	Survey	38.7954	36°	38.796225°	
пеш			-121.7356	47 °	-121.738902°		
DWR ID	/R ID DWR_RD0787_01_f _ 2018_3						
Comment Code							

No Photos

Inspector Comment

2017 Site ID: CBD 0.9 L

Status: Eroding

2017 Field Notes: Oversized embankment.

Site History: 2011 - Large scallops throughout the entire reach. Toe scour due to tree pop-outs, resulting in a steepening slope. The reduced resistive forces plus clay levee may increase the loading

N : Not Inspected/Rated C : Corrected

+ Issue Type Ma : Maintenance Deficiency
Ob : Design & System Obsolescence En: Enforcement

## **Levee Inspection Report By Mile - Fall 2019**

## **Reclamation District No. 0787 Fair**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/02/2019 10/02/2019	Zach Jojola

LM Start	0.73	Rating **	М	Issue No.		4
LM End	0.86	Issue Type +	Ма	Location *		WS
Category Supplemental				GPS Latitude/Longitude		
Calegory			Start		End	
Item	2017 Stor	m Damage		38.79576	9°	38.796340°
пеш				-121.73679	8 °	-121.738956 °
DWR ID	RD 787-01					

#### Inspector Comment

Comment Code

Levee Evaluation Comments

Description: Site ID No:182

Site Designation:RD 787-01 Repair Type: Erosion Rating:Area of Concern Field Date:7/18/2017

Notes:

LM Start	0.73	Rating **	М	Issue No.	4 (cont)
LM End	0.86	Issue Type +	Ma	Location *	WS

# Photo 1 of 6: FA\_2019\_RD0787\_212\_4\_20191003\_00019.jpg



View of the steep waterside slope at LM 0.86. Fall 2019.

#### Photo 2 of 6: FA\_2019\_RD0787\_212\_4\_20191003\_00020.jpg



View of the waterside slope bak caving from the adjacent waterside berm at LM 0.86. Fall 2019.

## Levee Inspection Report By Mile - Fall 2019

#### **Reclamation District No. 0787 Fair**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/02/2019 10/02/2019	Zach Jojola

LM Start	0.73	Rating **	М	Issue No.		4 (cont)
LM End	0.86	Issue Type +	Ма	Location *		WS
Category				GPS Latitude/Longitude		
Calegory			Start		End	
Item	2017 Stor	m Damage	38.7957	69°	38.796340°	
пеш			-121.73679	98°	-121.738956 °	
DWR ID	RD 787-01					

## Inspector Comment

Comment Code

Levee Evaluation Comments

Description: Site ID No:182

Site Designation:RD 787-01 Repair Type: Erosion Rating:Area of Concern Field Date:7/18/2017

Notes:

LM Start	0.73	Rating **	М	Issue No.	4 (cont)
LM End	0.86	Issue Type +	Ma	Location *	WS



View of bank caving on the waterside slope, facing downstream. Spring 2019.

#### Photo 4 of 6: LEVAL\_FA\_2019\_182\_1520.jpg



## Levee Inspection Report By Mile - Fall 2019

#### **Reclamation District No. 0787 Fair**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/02/2019 10/02/2019	Zach Jojola

LM Start	0.73	Rating **	М	Issue No.		4 (cont)
LM End	0.86	Issue Type +	Ма	Location *		WS
Category	Supplemental			GPS Latitude/Longitude		
Calegory	Category					End
Item	2017 Storm Damage			38.79576	9°	38.796340°
пеш				-121.73679	8°	-121.738956°
DWR ID	RD 787-01					

#### Inspector Comment

Comment Code

Levee Evaluation Comments

Description: Site ID No:182

Site Designation:RD 787-01 Repair Type: Erosion Rating:Area of Concern Field Date:7/18/2017

Notes:

LM Start	0.73	Rating **	М	Issue No.	4 (cont)
LM End	0.86	Issue Type +	Ma	Location *	WS



Photo 6 of 6: LEVAL\_FA\_2019\_182\_1523.jpg



## Levee Inspection Report By Mile - Fall 2019

## **Reclamation District No. 0787 Fair**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/02/2019 10/02/2019	Zach Jojola

LM Start	0.73	Rating **	A/W	Issue No.		9
LM End	0.73	Issue Type +	Ma	Location *		WS
Category	Earthen L	evee		GPS La	atitud	e/Longitude
Calegory				Start		End
Item	Erosion / Bank Caving			38.7958	814°	38.795814°
item				-121.736799°		-121.736799°
DWR ID DWR_RD0787_01_s _ 2017_9						
Comment Code						
E1 : Note a	and monito	r erosion site				
Inspector Comment						
Erosion on the waterside slope from 2017 storms. Recommend monitoring.						

Photo 1 of 3: FA_2019_RD0787_212_9_20190829_00005.jpg

View of erosion on the waterside slope, facing upstream. Fall 2018.

# LM Start 0.73 Rating \*\* A/W Issue No. 9 (cont) LM End 0.73 Issue Type + Ma Location \* WS

Photo 2 of 3: FA\_2019\_RD0787\_212\_9\_20190829\_00006.jpg



Additional view of erosion, facing upstream. Fall 2018.

LM Start	0.73	Rating **	A/W	Issue No.	9 (cont)
LM End	0.73	Issue Type +	Ma	Location *	WS



View of erosion, facing downstream. Fall 2018.

\* Location

LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown

\*\* Rating

A : Acceptable N : Not Inspected/Rated M : Maintenance Deficiency

C : Corrected Ob : Design & System Obsolescence

U : Unacceptable A/W : Acceptable but Monitor & Maintain

\*\* Rating

A : Acceptable M : Minimally Acceptable Ob : Design & System Obsolescence

En : Enforcement

## Levee Inspection Report By Mile - Fall 2019

## **Reclamation District No. 0787 Fair**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/02/2019 10/02/2019	Zach Jojola

LM Start	0.75	Rating **	A/W	Issue No.		12
LM End	0.75	Issue Type +	Ma	Location *		WS
Category	Earthen L	evee		GPS La	atitud	le/Longitude
Calegory				Start		End
Item	Erosion / I	Bank Caving		38.7958	91 °	38.795891 °
item				-121.7370	98°	-121.737098 °
DWR ID DWR_RD0787_01_f _ 2017_12						
Comment Code						
E1 : Note and monitor erosion site.						
Inspector Comment						
Erosion on the waterside slope from 2017 storms. Recommend monitoring.						

LM Start	0.75	Rating **	A/W	Issue No.	12 (cont)
LM End	0.75	Issue Type +	Ma	Location *	WS



View of erosion on the waterside slope, facing downstream. Fall 2018.

Photo 2 of 2: FA\_2019\_RD0787\_212\_12\_20190829\_00010.jpg



View of the erosion the waterside slope, facing upstream. Fall 2018.

LM Start	0.77	Rating **	A/W	Issue No.		15	
LM End	0.77	Issue Type +	Ма	Location *		WS	
Category	Earthen L	evee		GPS Latitude/Longitude			
Calegory				Start		End	
Item	Erosion / Bank Caving			38.7959	96°	38.795996°	
item						-121.737493°	
DWR ID DWR_RD0787_01_f _ 2018_15							
Comment Code							
E1 : Note and monitor erosion site.							
Inspector Comment							
Erosion on the waterside slope from 2017 storms. Recommend monitoring.							



View of erosion on the waterside slope, facing downstream. Fall 2018.

* Location	** Rating		+ Issue Type
LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement

## **Levee Inspection Report By Mile - Fall 2019**

## **Reclamation District No. 0787 Fair**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/02/2019 10/02/2019	Zach Jojola

LM Start	0.77	Rating **	A/W	Issue No.		15 (cont)	
LM End	0.77	Issue Type +	Ма	Location *		WS	
Catagoria Earthen Levee			GPS Latitude/Longitude				
Calegory	Category			Start		End	
Item	Erosion / Bank Caving			38.795996°		38.795996°	
пеш	item				93°	-121.737493°	
DWR ID DWR_RD0787_01_f _ 2018_15							
Comment Code							
E1 : Note and monitor erosion site.							
Inspector Comment							
Erosion on the waterside slope from 2017 storms. Recommend monitoring.							

Photo 2 of 2: FA\_2019\_RD0787\_212\_15\_20190829\_00013.jpg



View of sloughing on waterside slope. Spring 2017.

LM Start	0.78	Rating **	A/W	Issue No.		16
LM End	0.78	Issue Type +	Ма	Location *	WS	
Catagoria Earthen Levee			GPS Latitude/Longitude			
Category		Start		End		
Item Erosion / Bank Caving			38.7960	42°	38.796042°	
пеш				-121.7376	61 °	-121.737661 °
DWR ID DWR_RD0787_01_s _ 2017_16						

Comment Code

E1: Note and monitor erosion site.

Inspector Comment

Erosion on the waterside slope from 2017 storms. Recommend monitoring.



View of erosion on the waterside slope, facing downstream. Fall 2018.

No Photos

LM Start	1.35	Rating **	С	Issue No.		6	
LM End	1.35	Issue Type +	Ma	Location *	WS		
Catagoria Earthen Levee		GPS Latitude/Longitude					
Calegory	Category		Start		End		
ltem Encroachments		38.800434°		38.800434	0		
				-121.746369°		-121.746369	0
DWR ID DWR_RD0787_01_s _ 2019_6							
		Comn	nent Coo	le			
DE : Debris							
Inspector Comment							

: Acceptable : Minimally Acceptable

U : Unacceptable

+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence A/W : Acceptable but Monitor & Maintain En: Enforcement

\* Location

LS: Land Side

WS: Water Side

CR : Crown

A couch on the waterside slope needs removal.

N/A: Not Applicable

N: Not Inspected/Rated

C : Corrected

## Levee Inspection Report By Mile - Fall 2019

## **Reclamation District No. 0787 Fair**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/02/2019 10/02/2019	Zach Jojola

LM Start	3.38	Rating **	М	Issue No.		11		
LM End	3.38	Issue Type +	Ma	Location *		WS		
Catagory	Catagoria Earthen Levee				GPS Latitude/Longitude			
Calegory	Category			Start		End		
Item	Encroachments			38.814734°		38.814734°		
пеш	-121.778979° -121.778					-121.778979°		
DWR ID DWR_RD0787_01_f _ 2019_11								
Comment Code								
DE : Debris								
Inspector Comment								
A cabinet was dumped on the waterside slope.								

Photo 1 of 1: FA\_2019\_RD0787\_212\_11\_20191003\_00021.jpg



View of the debris on the waterside slope. Fall 2019.